A NEW SPECIES OF *HEDEOMA* (LABIATAE) FROM NORTH CENTRAL MEXICO

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Hedeoma is a widespread genus distributed principally in southwestern United States and northern Mexico. Many species of *Hedeoma* are abundant and somewhat weedy herbaceous annuals and perennials and make up what might be termed the central core of the genus. These species are seemingly evolutionarily active and their phenetic coherence is easily perceived. Other subgroupings within *Hedeoma* are quite different. Their species are robust perennials or semi-shrubs, confined largely to isolated mountains in the Chihuahuan and Lower Sonoran deserts. As a group they have been poorly collected and our understanding of their patterns of variation and evolutionary trends is likewise meager. In recent years, with more intensive field work in our desert systems, a number of new taxa and many new collection records have been added to these groups (Irving, 1967; Irving, 1970; Moran, 1969). This work has revealed that intraspecific variation is much wider than was once delineated (Irving, 1968) and that many "clear-cut" taxa must now be viewed more cautiously. Moreover, the genus *Poliomintha*, allied to the shrubby hedeomas of the Chihuahuan Desert, is questionably distinct. Although no changes are proposed here, the recent discoveries of new taxa and the greater understanding of morphological variation, especially in such species as *H. palmeri* and *H. montanum*, have left the generic boundary between *Hedeoma* and *Poliomintha* tenuous.

Field efforts toward the forthcoming flora of the Chihuahuan Desert (Johnston, Hendrickson and collaborators) have uncovered still another new and heretofore uncollected desert species.

HEDEOMA **johnstonii** Irving sp. nov. Fig. 1.

Herbae perennae ad 35 cm altae caulibus multis praeter modos comosos glabris. Folia glabra ovato-oblanceolata 10-20 mm longs 4-7 mm lata dentata base attenuata apice acuta petioli breves. Cymulae 1-3-florae. Calycis tubus 8-12 mm longus tubulosi-infundibuliformis limbus bilabiatus, dentes superi labium reflexum formantes dentes inferi adscendents. Corolla roseoviolacea tenuis ca 45 mm longa. Mericarpia badia ca 2 mm longa 1 mm lata. Chromosomatum numerus ignotus.

Wiry perennial herbs up to 30.0 cm tall; shoots ascending or decumbent, numerous, branching primarily from the base and rooting at the lower nodes, glabrous except for a minute tuft of retrorsely curling hairs at each node. Leaves spreading or ascending, stiff membranous in texture, glabrous, conspicuously glandular punctate on the lower surface, ovate-oblanceolate,

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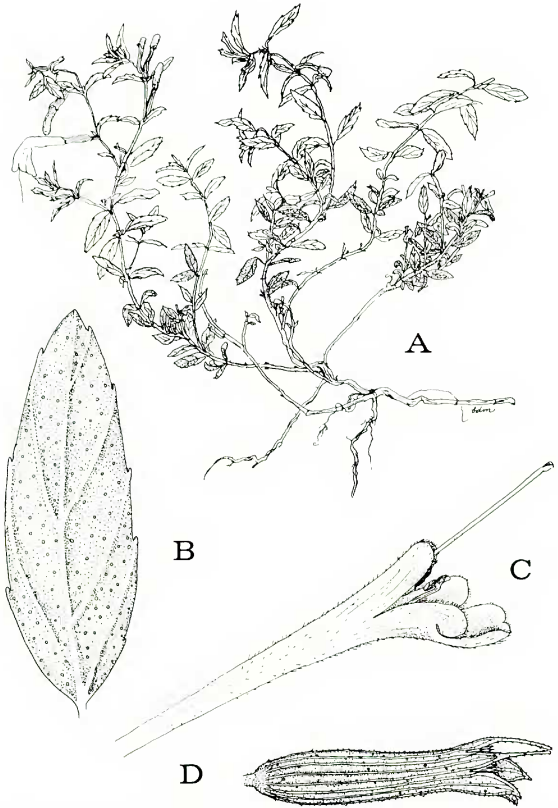

Fig. 1. *Hedeoma johnstonii*. A. Habit, X ½; B. Leaf undersurface, X 5; C. Corolla, X 5; D. Calyx, X 5.

10.0-20.0 mm long, 4.0-7.0 mm wide, dentate with 4-5 pairs of teeth terminating the costae, apex acute, base attenuate to a short petiole (ca. 1.5 mm long), midrib and secondaries conspicuously elevated. Cymules 1-3 flowered, well-spaced along the upper one-third of the stem; primary peduncles ca. 1.0 mm long; primary pedicels ca. 3.0 mm long; bracteoles lanceolate, equal to or slightly longer than the pedicels. Calyx 10.0-15.0 mm long (base to tip of upper teeth), tubular-funnelform, not gibbous and dilated upwardly, sparsely hirsute; upper teeth partially united forming a small but conspicuously reflexed lip, the lobes triangular ca. 1.0 mm long, sparsely ciliate; lower teeth deltoid below ca. 1.0 mm wide, abruptly tapering to an aristate apex, ca. 1.0-2.0 mm long, hirsute-ciliate; annulus located just below the teeth, included. Corolla showy, long and slender, up to 45 mm long from its base to the tip of the upper lip, pink-violet, broadly annulate within where seated in the calyx; upper lip short, ca. 4.0 mm long, 3.0 mm wide, emarginate; the lower lip spreading, ca. 5.0 mm long, ca. 3.0 mm wide. Nutlets 2.0 mm long, 1.0 mm wide. Chromosome number unknown.

Type: MEXICO. Coahuila: Canyon Hundido on north side of Pico de Centinela, Sierra del Jardin, 8 km e. of Rancho El Jardin. "Steep canyon through igneous sierra, gravelly and sandy loam derived from extrusive igneous rocks, 1500-2250 m." 27 July 1973: *M. C. Johnston, F. Chiang, T. L. Wendt* and *D. Riskind 11803*. (Holotype, TEX; Isotypes to be distributed)

Additional Collections. MEXICO. Coahuila. Sierra del Jardin e. of Rancho El Caballo. 16 Sept. 1972. *F. Chiang, T. L. Wendt* and *M. C. Johnston 9341*. Sierra Maderas del Carmen, Canyon El Dos. 3 Aug. 1974. *T. L. Wendt* and *A. Adamcewicz 469*.

Hedeoma johnstonii is a distinctive species apparently endemic to the steep igneous slopes of the Sierra del Jardin, Coahuila, Mexico. As with many of the narrowly endemic species of *Hedeoma* its affinities are puzzling. Its habit is very reminiscent of *Hedeoma bellum*, an endemic of the mountains of the western coast of Mexico, but, in the details of its calyx and corolla, it is more closely allied to *Hedeoma costatum* and its allies. It is readily separated from all species of *Hedeoma* by its glabrous stems, its glabrous, dentate leaves, and its exceptionally long and showy corollas.

The specific epithet honors Marshall C. Johnston who not only first collected the species and judged it to be the "most beautiful of all Hedeomas" but who also has been a continuing source of encouragement and support for many years.

I should like to also thank Dr. Johnston for his Latin diagnosis and express my gratitude to my Research Associate, Susan Brenholts, for her help in many ways. Acknowledgement is also made to Brenda Mahler for her illustrations.

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